

## CLAIMS

1. A method of treating, inhibiting, or preventing mucositis in a human patient, said method comprising administering to said patient first and second different therapeutic agents, wherein said first therapeutic agent is an NSAID, an inflammatory cytokine inhibitor, or a mast cell inhibitor; and said second therapeutic agent is an inflammatory cytokine inhibitor, a mast cell inhibitor, an MMP inhibitor, an NSAID, or an NO inhibitor.
2. The method of claim 1, wherein at least one of said first and second agents is an NSAID which is a COX-1 or COX-2 inhibitor.
3. The method of claim 2, wherein said COX-1 inhibitor is indomethacin or flurbiprofen.
4. The method of claim 1, wherein the first agent is an inflammatory cytokine inhibitor selected from an IL-6 inhibitor, a TNF-alpha inhibitor, an IL-1 inhibitor, and an interferon-gamma inhibitor.
5. The method of claim 4 wherein the first agent is a TNF-alpha

inhibitor and the second agent is an MMP inhibitor.

6. The method of claim 1 wherein said MMP inhibitor is a tetracycline.

7. The method of claim 6 wherein said tetracycline is minocycline.

8. The method of claim 6 wherein the first agent is an NSAID.

5 9. The method of claim 1 wherein the NO inhibitor is aminoguanidine or guanidine.

10. The method of claim 1 wherein the TNF-alpha inhibitor is thalidomide.

10 11. The method of claim 1 wherein the first agent is a mast cell inhibitor selected from an antihistamine, a serine protease inhibitor, and a degranulation inhibitor.

12. The method of claim 1 wherein the first and second agents are

provided mixed together in a composition.

13. The method of claim 12, wherein the composition is a liquid adapted for use as an oral rinse.

14. The method of claim 12, wherein the composition is a solid adapted  
5 for oral ingestion.

15. A method of treating, inhibiting, or preventing mucositis in a human patient, said method comprising administering to said patient an effective amount of a therapeutic agent selected from [an MMP inhibitor, an inflammatory cytokine inhibitor and a mast cell inhibitor].

10 16. The method of claim 15, wherein the mast cell inhibitor is a degranulation inhibitor.

17. The method of claim 15, wherein the mast cell inhibitor is an antihistamine.

18. The method of claim 15, wherein the mast cell inhibitor is a serine protease inhibitor.

5 19. The method of claim 15, wherein the MMP inhibitor is a tetracycline.

20. The method of claim 19, wherein the tetracycline is minocycline.

21. The method of claim 1, wherein said method further comprises administering to said patient a third therapeutic agent in an amount sufficient to inhibit infection, wherein said third therapeutic agent is an antimicrobial  
10 compound.

22. The method of claim 1, wherein said mucositis is induced by antineoplastic therapy.

23. The method of claim 22, wherein said mucositis is induced by chemotherapy.

24. The method of claim 22, wherein said mucositis is induced by radiation therapy.

25. The method of claim 22, wherein said patient is a cancer patient preparing to undergo chemotherapy or radiation therapy.

5 26. The method of claim 22, wherein said patient is a cancer patient currently undergoing chemotherapy or radiation therapy.

27. The method of claim 1, wherein said mucositis is oral mucositis.

10 28. A pharmaceutical composition for treating oral mucositis comprising

(a) a first therapeutic agent comprising an NSAID, an inflammatory cytokine inhibitor, or a mast cell inhibitor;

15 (b) a second, different therapeutic agent comprising an inflammatory cytokine inhibitor, a mast cell inhibitor, an MMP inhibitor, an NSAID, or an NO inhibitor; and

(c) a pharmaceutically acceptable carrier, wherein said first and second

therapeutic agents are present in amounts sufficient to inhibit mucositis in a patient suffering from mucositis or at risk for mucositis.

29. The pharmaceutical composition of claim 28, wherein said composition is formulated into a lozenge, a tablet, an oral rinse, an oral paste, or an oral gel.

30. The pharmaceutical composition of claim 28, wherein said mast cell inhibitor is an antihistamine.

31. The pharmaceutical composition of claim 28, wherein said anti-inflammatory agent is an NSAID.

32. The pharmaceutical composition of claim 31, wherein said composition further comprises an anti-ulcer agent in an amount sufficient to inhibit gastric mucosal injury.

33. The pharmaceutical composition of claim 28, wherein said anti-

inflammatory agent is a cyclooxygenase-2 inhibitor.

34. The pharmaceutical composition of claim 28, wherein said composition further comprises an antimicrobial agent in an amount sufficient to inhibit infection.

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